

Section 5 Residential Component

5.0 Overview

The City of Carlsbad encompasses approximately 42 square miles, and as of January 1, 2001, the population of Carlsbad was 83,469 according to the California Department of Finance. At buildout, sometime beyond the year 2010, there will be at most 54,599 residential units in Carlsbad, housing approximately 135,000 residents. To varying degrees, the residential community contributes to water quality degradation and therefore plays a part in the solution. This section discusses Permit requirements that apply to the Residential Component (areas and activities) of the Jurisdictional Urban Runoff Management Plan (JURMP) and meets or exceeds minimum requirements as specified in Section H of the Permit. The following subsections address impacts from urban runoff from residential areas and activities and what actions are proposed by the City of Carlsbad to minimize those impacts on receiving water quality:

- Pollution Prevention (Section 5.1)
- Threat to Water Quality Prioritization (Section 5.2)
- Best Management Practices Implementation (Section 5.3)
- Enforcement of Residential Areas and Activities (Section 5.4)

Subsections 5.1 through 5.4 use a table format to briefly summarize the purpose of the subsection, quote the applicable regulatory requirements from Sections F and H of the Permit (*italicized*), and list the City's action plans. The rest of the subsection describes the specific actions that have been completed, are in progress, or the planned schedule for implementation.

The types of information that should be collected for use in preparing the Annual Report and Assessment/Evaluation of the JURMP is outlined in Section 11 of this JURMP, Assessment of Jurisdictional URMP Effectiveness Component.

5.1 Pollution Prevention

5.1.1 Purpose and Permit Requirements

Purpose	The purpose of this Permit requirement is to evaluate the pollution prevention opportunities applicable to residential areas and activities for preventing or reducing pollutants from entering the storm drain system.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Residential Component for Pollution Prevention is as follows:</p> <p>Section F.3.d.(1) <i>Each Copermittee shall include pollution prevention methods in its Residential (Existing Development) Component and shall encourage their use by residents, where appropriate.</i></p>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Residential Component for Pollution Prevention is as follows:</p> <p>Section H.1.a.(5)(a) <i>Which pollution prevention methods will be encouraged for implementation, and how and where they will be encouraged.</i></p>
City Action Plans	<ol style="list-style-type: none">1) Develop a list of pollution prevention opportunities for residential activities.2) Describe how the City will encourage the residential community to implement pollution prevention strategies.

5.1.2 Pollution Prevention Action Plans

Action #1 - Develop a list of pollution prevention opportunities for residential activities.

Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants. There are four key components to a pollution prevention program and a fifth component added for storm water. Reviewing the following five “Rs” will assist in identifying the pollution prevention opportunities available for residential activities. The definitions of these terms are as follows:

- Reduce – BEFORE generating a waste stream, minimize the quantity or toxicity of the waste by substituting nontoxic chemicals.
- Reuse – Material, unwanted in one area, may be used for its intended purpose in another area.
- Recycle – Take used materials, reprocess, and produce a useful product in the same or other form.
- Rebuy – Purchase a product that contains recycled-content materials.
- Redirect – Divert the flow of storm water to reduce or eliminate contact with potential pollution. Move storm water around direct contact with known pollutants.

Specific pollution prevention strategies for the residential population will be addressed in the City’s outreach and education efforts (section 9 of this JURMP), and will be tailored to the specific residential activity. General pollution prevention examples for residential areas and activities are as follows:

- Use alternative, safer, or recycled products.
- Reduce the amount of hazardous materials by implementing natural controls.
- Redirect storm water flows away from areas of concern.
- Reduce use of water or implement dry methods.
- Recycle and properly dispose of solid waste.
- Move or cover potential pollutant sources from storm water contact.

Action #2 - Describe how the City will encourage the residential community to implement pollution prevention strategies.

The City is implementing a comprehensive Outreach and Education program, and the residential community is one of the target audiences. The ultimate goal of the City is to improve water quality and minimize polluted storm water runoff by preventing it at the “source” in such manner that treatment or other structural controls are unnecessary or minimized. The City will work to achieve this outreach and education goal by implementing a systematic approach that increases knowledge and awareness of pollution prevention measures. The residential community will be educated using a variety of outreach methods to progressively achieve the key stages of awareness and ownership of storm water runoff pollution and prevention practices by using “Best Management Practices”. BMPs for the residential community are further described in section 5.3 of this component.

5.2 Threat to Water Quality Prioritization

5.2.1 Purpose and Permit Requirements

Purpose	The purpose of this Permit requirement is to prioritize importance of Residential activities in terms of impact to storm water quality.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirements under the Residential Component for Threat to Water Quality Prioritization are as follows:</p> <p>Section F.3.d.(2) <i>Each Copermittee shall identify high priority residential areas and activities. At a minimum, these shall include:</i></p> <ul style="list-style-type: none">• <i>Automobile repair and maintenance;</i>• <i>Automobile washing;</i>• <i>Automobile parking;</i>• <i>Home and garden care activities and product use (pesticides, herbicides, and fertilizers);</i>• <i>Disposal of household hazardous waste (e.g., paints, cleaning products);</i>• <i>Disposal of pet waste;</i>• <i>Disposal of green waste;</i>• <i>Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;</i>• <i>Any residence tributary to a Clean Water Act section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and</i>• <i>Any residence within or directly adjacent to or discharging directly to a coastal lagoon or other receiving waters within an environmentally sensitive area (as defined in F.1.b.(2)(a)vii of this Order).</i>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Residential Component for Threat to Water Quality Prioritization is as follows:</p> <p>Section H.1.a.(5)(b) <i>A completed inventory of high priority residential areas and activities.</i></p>
City Action Plan	1) Describe how the City will address the high priority residential areas and activities.

5.2.2 Threat to Water Quality Prioritization Action

Action #1 - Describe how the City will address the high priority residential areas and activities.

Permit section F.3.d.2 lists the high priority residential areas and activities. The City will address all of these activities through the Outreach and Education program, and by responding to reports of illicit connections, illegal residential discharges or other public complaints. Investigating illegal discharges or complaint reports is addressed in Section 8 of this JURMP.

The City will also address all residential areas equitably throughout its jurisdiction, meaning residents who live 5 miles from a lagoon will be expected to implement the same BMPs as those who live within 200 feet of a lagoon.

The City's Outreach and Education program will address high priority residential activities at the local, watershed and regional levels using the most efficient and effective methods available. Current and on-going efforts include the following:

- Public Presentations
- Creation of City Internet Web Site for the Storm Water Protection Program
- Enhancement of the City's Storm Water HOTline
- Creation of Storm Water Protection Program email address
- BMP Brochure development
- General Outreach efforts through printed ads, press releases, media interviews

Specific education efforts are further detailed in Section 9 of this JURMP.

5.3 Best Management Practices Implementation

5.3.1 Purpose and Permit Requirements

Purpose

The purpose of this section is to list the BMPs best suited for each residential activity defined in Section 5.2 of this JURMP and how those BMPs will be implemented.

NPDES Permit Order No. 2001- 01 Requirement(s)

The Permit requirements under the Residential Component Best Management Practices Implemented are as follows:

Section F.3.d.(3)(a)

Each Copermittee shall designate a set of minimum BMPs for high threat to water quality residential areas and activities (as required under section F.3.d.(2)). The designated minimum BMPs for high threat to water quality Residential areas and activities shall be area or activity specific.

Section F.3.d.(3)(b)

Each Copermittee shall require implementation of the designated minimum BMPs for high threat to water quality residential areas and activities. If particular minimum BMPs are infeasible for any specific site/source, each Copermittee shall require implementation of other equivalent BMPs. Each Copermittee shall also implement, or require implementation of, any additional BMPs as are necessary to comply with this Order.

Section F.3.d.(3)(c)

Each Copermittee shall implement, or require implementation of, any additional controls for residential areas and activities tributary to Clean Water Act section 303(d) impaired water bodies (where a residential area or activity generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for residential areas within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

Jurisdictional URMP Requirements

The Permit requirements under the Residential Component for BMP implementation are as follows:

Section H.1.a.(5)(c)

Which BMPs will be implemented, or required to be implemented, for high priority areas and activities.

Section H.1.a.(5)(d)

How BMPs will be implemented, or required to be implemented, for high priority areas and activities.

City Action Plans

- 1) Develop BMPs for high priority residential activities, and distribute this information using the most efficient and effective methods available.
- 2) Investigate complaints and illegal discharges and ensure compliance with minimum BMPs.

5.3.2 Best Management Practices Implementation Action Plans

Action #1 – Develop BMPs for high priority residential activities, and distribute this information using the most efficient and effective methods available.

BMPs are crucial to the success of runoff control in growing urban areas. The City's Storm Water Outreach Team has developed various BMP booklets for high priority residential activities. The City has already developed fact sheets, booklets, and brochures addressing pet waste, lawn and garden care, motor oil, and residential car washing. Brochures and fact sheets for auto repair do-it yourselfers, trash, home improvement projects, mortar and concrete application, and spa and swimming pool maintenance are currently being drafted. The local and regional outreach teams will continue to develop BMP information for other residential activities and may inform the residential community of BMPs through the following methods:

- public presentations;
- City web site;
- printed ads, press releases, media interviews;
- direct mailing; and
- outreach activities.

Residential BMPs are usually non-structural and will be targeted for activities defined by the Municipal Permit as “*high priority*.” Initially, BMPs will be implemented as educational materials directed at specific activities. The Carlsbad Municipal Code has been revised to include prohibitions of most non-storm water discharges. Storm Water Program priorities will be reviewed periodically to ensure that they continue to reflect the best available data and information. The following is a description of the BMPs the City **recommends and encourages** the residential community to use.

1. Residential Car Washing

- a. Hire only mobile detail operators that will capture wash water and chemicals. It is unlawful for commercial vehicle washing operators to allow wash water to enter the storm drain system.
- b. Use the minimal amount and least toxic detergents and degreasers you will need to complete the job. Use phosphate free detergents.
- c. Use a hose nozzle with a trigger to save water.
- d. Pour your bucket of soapy water down the sink when you're done, not in the street.
- e. Avoid using engine and wheel cleaners or degreasers.
- f. Take your car to a commercial car wash, especially if you plan to clean the engine or bottom of your car.
- g. Wash vehicles on grassy or gravel areas where wash water can seep into the ground

2. Lawn and Garden Care

- a. Keep irrigation systems well maintained and water only when needed to save money and prevent over-watering.
- b. Use fertilizers and pesticides sparingly.
- c. Have your soil tested to determine the nutrients needed to maintain a healthy lawn.
- d. Consider using organic fertilizers - they release nutrients more slowly.
- e. Leave mulched grass clippings on the lawn to act as a natural fertilizer.
- f. Use pesticides only when absolutely necessary. Use the least toxic product intended to target a specific pest, such as insecticidal soaps, boric acid, etc. Always read the label and use only as directed.

- g. Use predatory insects to control harmful pests when possible.
 - h. Properly dispose of unwanted pesticides and fertilizers at Household Hazardous Waste collection facilities.
 - i. Don't blow or rake leaves and other yard waste into the street or gutter.
 - j. Recycle yard waste or start your own compost pile.
 - k. Don't over irrigate. Use drip irrigation, soaker hoses or microspray system and water early in the morning.
 - l. If you have a spray head sprinkler system, consider adjusting your watering method to a cycle and soak. Instead of watering for 15 minutes straight, break up the sessions into 5 minutes intervals allowing it to soak in before the next application.
3. Pet Waste
- a. The best way to dispose of pet waste is to flush it down the toilet because it gets treated by a sewage treatment plant. Otherwise, seal it in a bag and place it in the trash.
 - b. Carry a plastic bag when walking pets and be sure to pick up after them.
 - c. Clean up pet waste in your yard frequently.
 - d. Pick up after your pets before cleaning patios, driveways and other hard surfaced areas.
 - e. Never hose pet waste into the street or gutter.
4. Motor Oil
- a. Never dispose of oil or other engine fluids down the storm drain, on the ground or into a ditch.
 - b. Recycle used motor oil. There are several locations in Carlsbad that accept used motor oil. For hours and locations, call 760-434-2980.
 - c. Buy recycled ("refined") motor oil to use in your car.
 - d. Stop drips. Check for oil leaks regularly and fix them promptly.
 - e. Keep your car in good repair to reduce oil use.
 - f. Use ground cloths or drip pans beneath your vehicle if you have leaks or are doing engine work.
 - g. Clean up spills immediately.
 - h. Collect all used oil in containers with tight fitting lids. Do not mix different engine fluids.

Action #2 - Investigate complaints and non-storm water discharges and ensure compliance with minimum BMPs as appropriate.

The City has a Storm Water HOTline that allows the public to report any incidents of pollutant discharge to the storm drain or activities that impact water quality. The City Storm Water Program may also receive reports from the public through the storm water email address or through other City departments who have been contacted by Carlsbad residents. The City inspectors will respond to and attempt to properly resolve all reports and referrals. The City's focus for investigating residential complaints will be to provide specific information that will assist the public in understanding the effects of storm water pollution and how to prevent future impacts to water quality through implementing BMPs. When enforcement is necessary, the City inspector may utilize the appropriate enforcement mechanisms listed in section 5.4 of this component.

5.4 Enforcement of Residential Areas and Activities

5.4.1 Purpose and Permit Requirements

Purpose	The purpose of this section of the Residential Component is to define the enforcement actions associated with noncompliance of the City Ordinance.
NPDES Permit Order No. 2001- 01 Requirement(s)	<p>The Permit requirement under the Residential Component for Enforcement of Residential Areas and Activities is as follows:</p> <p>Section F.3.d.(4) <i>Each Copermittee shall enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.</i></p>
Jurisdictional URMP Requirements	<p>The Permit requirement under the Residential Component for Enforcement of Residential Areas and Activities is as follows:</p> <p>Section H.1.a.(5)(e) <i>A description of enforcement mechanisms and how they will be used.</i></p>
City Action Plans	<ol style="list-style-type: none">1) Generate a list of enforcement mechanisms for residential activities.2) Develop an Enforcement Response Plan to outline how each enforcement mechanism will be applied.

5.4.2 Enforcement of Residential Areas and Activities Action Plans

Action #1 - Generate a list of enforcement mechanism for each type of residential area or activity.

City inspectors and staff members with enforcement authority may initiate enforcement actions against residents who discharge pollutants to the storm water conveyance system, or who fail to comply with any required BMPs specified by the City. The inspectors, in accordance with the City's existing procedures, will document each observed violation. Depending on the severity of the violation, enforcement can range from a verbal warning to monetary fines. The inspectors will have flexibility to establish appropriate compliance time frames and to escalate enforcement on a case-by-case basis as needed to ensure compliance.

If a significant and/or immediate threat to water quality is observed by a City of Carlsbad inspector, action will be taken to require the responsible party to immediately cease the discharge. The enforcement mechanisms available to City of Carlsbad inspectors are as follows:

- (a) Verbal and/or written warnings;
- (b) Notice of Violation;
- (c) Compliance schedule;
- (d) Cease and Desist Orders or Stop Work Orders;
- (e) Notice to Clean, Test and/or Abate;
- (f) Suspension, revocation, or denial of permits or license;
- (g) Administrative penalties and fines;
- (h) Declaration of a Public Nuisance; and,
- (i) Civil and/or criminal court actions.

While these measures typically escalate in enforcement action, they are not required to be issued in the exact order presented here. The City inspector will apply any of the enforcement steps as appropriate according to the inspector's best professional judgment and the guidelines of the Enforcement Response Plan. A discussion of these measures is provided below.

1. Verbal and/or written Warnings

Informing the public on impacts to water quality and how to prevent storm water pollution is the focus of the City's residential program. Verbal warnings are often the initial method used to correct a violation and ensure compliance. On occasion, a written warning may also be given to notify the resident of a violation and how to correct it. The inspector should document the violation and notification in the complaint file, and record any time frames given for correcting the problem or follow-ups needed. In judging the degree of severity, the City of Carlsbad inspector may also take into account any history of similar or repeated violations at the site.

2. Notice of Violation

A written Notice of Violation is used when verbal or written warnings are not deemed sufficient to correct the violation or additional documentation is warranted. The written Notice of Violation describes the infraction that is to be corrected and the required response or time frames for correction. The notice is issued to the responsible party, and a copy is placed in the file. If the violation is corrected to the satisfaction of the inspector, the inspector will document compliance in the file.

3. Compliance Schedules

A compliance schedule may be issued to ensure that multiple violations or more complex violations requiring capital expenditures, improvements are corrected by specified deadlines.

4. Cease and Desist Orders or Stop Work Orders

A City inspector may issue an order to cease and desist a discharge, practice or operation that is occurring or is likely to take place in violation of the City ordinance. The inspector may direct the responsible party to take appropriate remedial or preventive action to prevent the violation from recurring. Whenever any work is being done contrary to the provisions of the City ordinance, the City inspector may issue a written order that the work be stopped until further notice.

5. Notice to Clean, Test and/or Abate

Whenever the enforcement official finds any sediment, waste or pollutants upon the sidewalk or a parcel of land that has potential to enter the City's storm water conveyance system in violation of the City ordinance, the inspector may issue a written notice to remove the material in any reasonable manner.

6. Suspension, Revocation, or Denial of Permits or Licenses

Violations of the City ordinance may be grounds for local permit or license denial, suspension, or revocation.

7. Administrative Penalties or Fines

Because violations vary in threat to water quality, City of Carlsbad inspectors may consider utilizing storm water field citations for infractions or misdemeanors. Like traffic violations, the penalty for a storm water infraction can be relatively minor for a first offense. Repeated violations could result in escalating fines or misdemeanor charges.

8. Declaration of a Public Nuisance

Whenever an existing condition or a discharge into the storm water conveyance system violates the City ordinance, it is considered a threat to public health, safety, and welfare and may be declared a public nuisance. The inspector may follow appropriate procedures to recommend a declaration of a Public Nuisance by City Council in order to abate the nuisance discharge or condition.

9. Civil and/or Criminal Court Actions

As a final resort, the City of Carlsbad may use civil and or criminal court actions under the State Porter Cologne Water Quality Act or the Federal Clean Water Act, which may result in significant fines levied upon the non-compliant responsible parties.

Action #2 – Develop an Enforcement Response Plan to outline how each enforcement mechanism will be applied.

The City will be writing an Enforcement Response Plan to specifically outline the procedures to be followed by City inspectors to identify, document, and respond to storm water violations. The plan will provide guidance in selecting initial and follow-up enforcement actions, identifying responsible staff, and specifying appropriate time frames for actions.